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REMARKS

Applicants acknowledge with appreciation the allowance of claim 20 and the allowability of claims 17 and 19 if rewritten in independent form including all the limitations of claim 1. Claims 1, 7, 10, 11, 13-15 and 20 have been amended to more particularly define Applicants' claimed invention. Basis for the amendment of claim 1 can be found in original claim 18 of Applicants' specification. Basis for the amendment of claim 20 can be found in original claim 19 of Applicants' specification. Claims 2-6 have been amended to remove the "or greater" language as requested by the Examiner. Claim 18 has been canceled due to the incorporation of the subject matter thereof into claim 1. New claims 21-23 have been added to more particularly define Applicants' claimed invention. Basis for new claim 21 can be found in original claims 1, 15 and 18 of Applicants' specification. Basis for new claim 22 can be found in original claims 1, 6 and 18 of Applicants' specification. Basis for new claim 23 can be found in original claims 1 and 17 of Applicants' specification. New claim 23 incorporates the subject matter of allowed claim 17 into original claim 1.

The rejection of claims 2-6 under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention, is respectfully traversed.

In view of the amendment of claims 2-6, this rejection is deemed improper and should be withdrawn.

The rejection of claims 1-5, 7-12 and 16-18 under 35 U.S.C. 102(b) as being anticipated by U.S. Patent 6,175,027 is respectfully traversed. It is noted that claims 16-18 should be 16 and 18 to make this rejection consistent with the disposition of claims in the Office Action.

The '027 patent discloses a method for producing an alkyl cyclopentadiene by reacting cyclopentadienyl Grignard with an alkyl halide and for converting the alkyl cyclopentadiene to a bis(n-alkyl cyclopentadienyl) Group IV metal dihalide.

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It is noted that Example 6 of the '027 patent is a paper example (present tense example) that illustrates the preparation of bis(N-butylcyclopentadienyl) zirconium dichloride. Indeed, with the exception of the reactants prepared in Examples 3 and 4 of the '027 patent, all of the other examples of the '027 patent are paper examples (present tense examples) not actually conducted by the patentee.

Nowhere does the '027 patent disclose or suggest a one pot method for the large scale production of an organometallic compound selected from a transition metal-containing amide, a transition metal-containing alkoxide, a transition metal-containing diketone or a transition metal-containing imide as claimed by Applicants. Any correlation between the methods used to produce bis(n-alkyl cyclopentadienyl) Group IV metal dihalides of the '027 patent and the one pot, large scale method used by Applicants to produce transition metal-containing amides, transition metal-containing alkoxides, transition metal-containing diketones and transition metal-containing imides is totally speculative and without scientific or engineering basis.

In regard to newly added claims 21 and 22, claim 21 incorporates the subject matter of original claim 15, and claim 22 incorporates the subject matter of original claim 6. Neither claim 15 nor claim 6 was rejected by the Examiner under the above rejection using the '027 patent.

Clearly the '027 patent does not anticipate claims 1-5, 7-12 and 16-18. In view of the above arguments and the amendment of claim 1, this rejection is deemed improper and should be withdrawn.

The rejection of claims 1-16 and 18 under 35 U.S.C. 103(a) as being unpatentable over Balboni et al., Inorganic Chemistry, Vol. 40, No. 26, pp. 6588-6597 (2001) is respectfully traversed.

The Balboni et al. reference discloses a one pot method for the preparation of a series of bisindenyl dimethylmetallocenes carried out by reacting a π -ligand

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with a 2-fold excess of MeLi, and then MtCl₄ (Mt = Ti, Zr, Hf). As noted by the Examiner in the Office Action, Balboni et al. does not disclose large scale methods for preparation of the bisindenyl dimethylmetallocenes. The bisindenyl dimethylmetallocenes of Balboni et al. are catalyst precursors for methylmetallocenium/borate catalyst systems for olefin polymerization.

Nowhere does the Balboni et al. reference disclose or suggest a one pot method for the large scale production of an organometallic compound selected from a transition metal-containing amide, a transition metal-containing alkoxide, a transition metal-containing diketone or a transition metal-containing imide as claimed by Applicants. Any correlation between the methods used to produce on a small scale the bisindenyl dimethylmetallocenes of the Balboni et al. reference and the one pot, large scale method used by Applicants to produce transition metal-containing amides, transition metal-containing alkoxides, transition metal-containing diketones and transition metal-containing imides is totally speculative and without scientific or engineering basis.

Indeed, the Balboni et al. reference actually teaches away from Applicants' claimed invention because the synthesis described therein is conducted on a small scale – not a large scale as required by Applicants' claimed invention. As is evident to a person skilled in the art, the scaling up of a process from small scale to large scale is fraught with unforeseen difficulties and problems. Not every small scale process can be scaled up to a large scale process.

For example, mass transfer, heat transfer and chemical kinetics are some of the factors that require careful consideration when scaling up a production process. The manner (e.g., quantities and order) in which the reactants are introduced into the large scale one pot process could result in concentration gradients leading to reaction conditions less suitable for desired organometallic compounds; inadequate mixing of the reactants could result in concentration gradients leading to reaction conditions less suitable for desired organometallic

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compounds; inadequate removal of heat of reaction and/or inadequate rate of heat removal could result in undesirable reaction mixture temperature leading to reaction conditions less suitable for desired organometallic compounds. The complexity of such difficulties and problems and the solutions thereto can extend well beyond the skill of a person of ordinary skill in the art to a person of extraordinary skill in the art.

Applicants submit that alleged obviousness of the instantly claimed invention must be predicated on something more than it would have been obvious to try scaling up the small scale synthesis of bisindenyl dimethylmetallocenes of Balboni et al. to a large scale production of organometallic compounds selected from transition metal-containing amides, transition metal-containing alkoxides, transition metal-containing diketones or transition metal-containing imides in order to arrive at Applicants' claimed one pot method for the large scale production of organometallic compounds or the possibility that such particularly defined one pot method for the large scale production of organometallic compounds would have been considered in the future, having been neglected in the past. See Ex parte Argabright et al. 161 USPQ 703. It is submitted that "obvious to try" is not a valid test of patentability, and patentability determinations based on that as a test are contrary to statute. See In re Mercier 515 F2d 1161, 185 USPQ 774; In re Antonie 559 F2d 618, 195 USPQ 6; In re Goodwin et al. 576 F2d 375, 198 USPQ 1; and In re Tomlinson et al. 363 F2d 928, 150 USPQ 623.

Clearly, it is only by hindsight that the Examiner could impute to the small scale synthesis of bisindenyl dimethylmetallocenes of Balboni et al. the large scale production of organometallic compounds selected from transition metal-containing amides, transition metal-containing alkoxides, transition metal-containing diketones or transition metal-containing imides to arrive at the instantly claimed one pot method for the large scale production of organometallic

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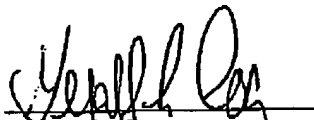
compounds, and such hindsight obviousness after the invention has been made is not the proper test. See In re Carroll 601 F2d 1184, 202 USPQ 571. As indicated above, Balboni et al. actually teaches away from Applicants' claimed invention because the synthesis described therein is conducted on a small scale – not a large scale as required by Applicants' claimed invention.

Clearly the Balboni et al. reference does not render obvious claims 1-16 and 18. In view of the above arguments and the cancellation of claim 18 and the amendment of claims 1, 7, 10, 11 and 13-15, this rejection is deemed improper and should be withdrawn.

It is respectfully submitted that the rejections of record are improper and that the application is in condition for allowance. Accordingly, reconsideration and allowance of all claims are courteously solicited.

A response to the Office Action mailed January 17, 2006 was due April 17, 2006. Accordingly, submitted herewith is a petition for an extension of time for three (3) months. Please charge any fees/surcharge which may be required by this paper, or credit any overpayment, to Deposit Account No. 16-2440.

Respectfully submitted,



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